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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,209	01/28/2004	Takashi Shuto	1777.1001	7641

21171 7590 03/08/2006

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EXAMINER
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ARBES, CARL J

ART UNIT	PAPER NUMBER
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3729

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/765,209

**Applicant(s)**

SHUTO ET AL.

**Examiner**

C. J. Arbes

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date herein
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

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The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Japan Pat No. 6-216524, by Yogo, of Record, hereinafter Yogo.

Yogo teaches a method of making a composite printed wiring board. The board has an insulating layer with pores filled with resin. A thermosetting resin layer is interleaved between board members. These members can be made from resin, ceramic metal or glass. After the laminated body is sealed with a heat-resistant elastic film, the inside of the film is subjected to a vacuum. Since the Examiner is not privy to the entire disclosure of the Yogo teaching it is held that if indeed Yogo does not teach separating the multi-layered body from a core substrate together with the metal layer by releasing the vacuum between the core substrate and the metal layer it would have been obvious to do in order to produce a circuit board which was substantially crack or slit-free.

Claims 1 and 4 are further rejected under 35 U.S.C. 103(a) as being unpatentable over Miyashita et al (Pat. No. 5,297,480) hereinafter Miyashita et al. Miyashita et al teach a high vacuum hot press for producing *inter alia* multi-layered circuit boards. The press includes a pair of heat insulating members and a thin metallic cover. The heat insulating members are located on a pair of bolsters. A multi-layered work piece is disposed between the bolsters in the sealed space. The work piece includes layers and also an adhesive. The sealed space is evacuated and the

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multilayered work piece is heated. The bolsters open and close relative to each other to bond the layers and thus a multilayered work piece is produced (Cf. Abstract) Miyashita et al teach that the work piece can be a wiring board (Cf. Col 1). The work piece can be considered to be resting on at least one of the so-called heat-insulating members and this element can be read as a core substrate. In any event after the multilayered wiring board is produced obviously it is removed from the hot press. That is there must be a vacuum breaking from the work piece and the insulating member. Otherwise the multilayered wiring board would not be able to be removed from the hot press. It would have been obvious to form a metal layer by using a buildup process if in fact Miyashita et al do not expressly teach this limitation since it is very common to make multilayered wiring boards using this method. As further applied to claim 4 it is held that "applying a prescribed treatment to the multilayered body which has been separated" would be so inclusive that any post making treatment such as cleaning, etching, washing, inspecting or the like would meet this limitation and so that a POSITIVE would perform ...applying a prescribed treatment to the multilayered body... after it was released from the hot press.


Claims 2 and 3 are held to be allowable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to C. J. Arbes whose telephone number is 571-272-4563. The examiner can normally be reached on M, T, R and F from 8 to 6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, P. Vo, can be reached on 571-272-4563. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
C. J. Arbes  
Primary Examiner  
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